

CLAIMS

1. A method for executing a program comprising a function call and one or more subsequent instructions, the method comprising the steps of:

processing, on a first thread, a function defined by the function call, the function having one or more programmer predefined typical return values;

for each predefined return value, pre-processing, on an additional thread, the one or more subsequent instructions assuming that the function returned that pre-defined return value,

thereby enabling said processor, on completion of processing said function, to make use of the pre-processing completed by the additional thread which used the actual return value.

2. The method of claim 1, wherein the program comprises a plurality of subsequent instructions defining one or more additional functions, the method further comprising:

pre-processing on each additional thread the plurality of subsequent instructions until a function is reached which is of external effect; and

blocking on said function having external effect until the actual return value is determined by the first thread.

3. The method of claim 2, wherein the blocking step also blocks on reaching a function which is affected by an external event.

4. An apparatus for executing a program comprising a function call and one or more subsequent instructions, the apparatus comprising:

5 means for processing, on a first thread, a function defined by the function call, the function having one or more predefined typical return values;

10 means for pre-processing for each predefined return value, on an additional thread, the one or more subsequent instructions assuming that the function returned that pre-defined return value,

thereby enabling said processor, on completion of processing said function, to make use of the pre-processing completed by the additional thread which used the actual return value.

15 5. The apparatus of claim 4, wherein the program comprises a plurality of subsequent instructions defining one or more additional functions, the apparatus further comprising:

20 means for pre-processing on each additional thread the plurality of subsequent instructions until a function is reached which is of external effect; and

25 means for blocking on said function having external effect until the actual return value is determined by the first thread.

6. The apparatus of claim 5, wherein the blocking means is operable to also block on reaching a function which is affected by an external event.

7. A computer program comprising program code means adapted to perform, when said program is run on a computer, the method of claim 1.

5 8. A compiler for generating a computer program comprising a function call defining a function, having one or more programmer predefined typical return values, and one or more subsequent instructions, the compiler comprising means for generating executable code, said
10 executable code for instructing a computer to process on a first thread the function and to pre-process, for each defined typical return value, on an additional thread the one or more subsequent instructions assuming that the function returned that pre-defined return value, thereby
15 enabling said processor, on completion of processing said function, to make use of the pre-processing completed by the additional thread which used the actual return value.

20